Genetics Research Opportunities for Community Colleges

Houston Community College

Project # 2006-03488 \$200,000

SERD need areas

- Student experiential learning
- Faculty preparation & enhancement for teaching
- Curricula design, materials development and library resources
- Scientific instrumentation for teaching
- Student recruitment, retention & educational quality

Houston Community College A. Tineke Berends tineke.berends@hccs.edu (713) 515-8569

Collaborators

- Texas A&M University Institute for Plant Genomics and Biotechnology
- University of Houston Victoria
- USDA Agriculture Research Service -Southern Plains Region
- Cornerstone Academy, a public middle school

Objective 1

- Prepare and motivate 84-133 underrepresented students to complete a college education for bioscience careers
- institutionalize a research component in an HCCS genetics course
- Integrate experiential learning in general biology courses

Objective 2

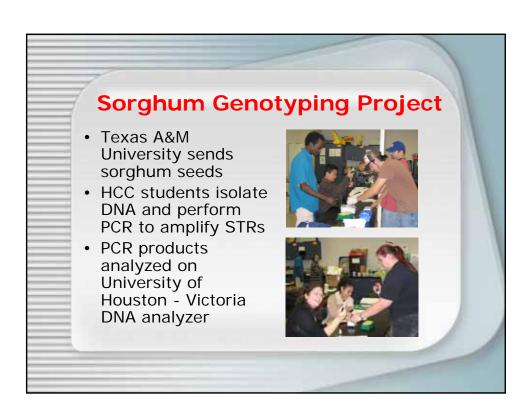
 Present professional development workshops and seminars to HCC faculty

Objective 3

 Disseminate information and products of the program to Houston middle and high school teachers, and to Texas college/university faculty

Student activities

- Expose at least 2500 general biology students a year to new hands-on activities in the classroom
- Summer internships for four students at ARS
- Institutionalize a sorghum genotyping research project in HCCS genetics classes:





• A "Discover Your DNA Day" for 7th graders at Cornerstone Academy, a public middle school, with 16-20 HCC student mentors/facilitators

Professional Development Workshops

- Workshops
 Two week-long workshops on genomics research to at least 12 biology faculty at HCC's Northwest and Central colleges
- Three 3-hour workshops for 36-40 biology faculty system-wide to encourage incorporation of experiential learning in the classroom

Dissemination

- Establish a web site about the program:
 http://nwc.hccs.edu/genetics
- Present program in a seminar for HCCS, University of Houston faculty, and HISD science teachers
- Publish information with the Texas
 Collaborative for teaching Excellence and
 the Texas Consortium for Hispanic Serving
 Institutions

Evaluation

- Attendance/stipend/enrollment/ grades records
- "Before and after", and follow-up surveys and evaluations
- · Student retention and transfer records
- Web site hits and queries, update records, other requests for information
- Course materials and other products
- Student applications for internships; internship supervisor reports